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Abstract

In an optical WDM network, each optical channel is modulated with a respective channel identity. Detectors, conveniently at multiplex ports of optical band filters, detect

5 the channel identities of all of the optical channels in an optical signal at the respective points to produce respective channel lists. A network management system determines channel lists for through ports of the optical band filters, identifies matching pairs of channel lists to determine a topology of each

10 node and to identify optical paths entering or leaving each node, and identifies matching pairs of channel lists for these paths to determine an inter-node topology of the network. The channel identity detector points can alternatively be at the optical paths entering or leaving each node.